



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<b>TRANSMITTAL FORM</b>  <i>(to be used for all correspondence after initial filing)</i>	Application Number	10/782,435	
	Filing Date	02/18/2004	
	First Named Inventor	Pramod B. Mahajan	
	Art Unit		
	Examiner Name		
Total Number of Pages in This Submission	5	Attorney Docket Number	1121C

ENCLOSURES (check all that apply)		
<input type="checkbox"/> Fee Transmittal Form  <input type="checkbox"/> Fee Attached  <input type="checkbox"/> Amendment / Reply  <input type="checkbox"/> After Final  <input type="checkbox"/> Affidavits/declaration(s)  <input type="checkbox"/> Extension of Time Request  <input type="checkbox"/> Express Abandonment Request  <input checked="" type="checkbox"/> Information Disclosure Statement  <input type="checkbox"/> Certified Copy of Priority Document(s)  <input type="checkbox"/> Response to Missing Parts/ Incomplete Application  <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s)  <input type="checkbox"/> Licensing-related Papers  <input type="checkbox"/> Petition  <input type="checkbox"/> Petition to Convert to a Provisional Application  <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address  <input type="checkbox"/> Terminal Disclaimer  <input type="checkbox"/> Request for Refund  <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance Communication to Group  <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences  <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)  <input type="checkbox"/> Proprietary Information  <input type="checkbox"/> Status Letter  <input checked="" type="checkbox"/> Other Enclosure(s) <i>(please identify below):</i>  1) Filing of an IDS under 37 CFR 1.97(b) 2) IDS References (1-24)
Remarks		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm or Individual name	Virginia Dress
Signature	<i>Virginia Dress</i>
Date	March 8, 2004

CERTIFICATE OF MAILING			
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.			
Typed or printed name	Virginia Dress		
Signature	<i>Virginia Dress</i>	Date	March 8, 2004

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor : Pramod B. Mahajan  
Application Number : 10/782,435  
Filing Date : 02/18/2004  
Title : RuvB Polynucleotides and Uses Thereof  
  
Group/Art Unit :  
Examiner :  
  
Attorney Docket Number : 1121C

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

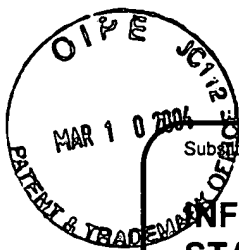
**FILING OF AN INFORMATION DISCLOSURE STATEMENT  
UNDER 37 CFR §1.97(b)**

The attached list of citations on PTO Form 1449 is being submitted under the provisions of 37 CFR §1.56 and §1.97(b) in order to comply with the duty of disclosure. Their inclusion herein should not, however, be construed as an admission that any particular cited reference is effective prior art or that it discloses or renders obvious any aspect of the claimed invention. A copy of each cited reference is enclosed, except for those references which are already part of the filewrapper. This statement is being filed within the time period specified in 37 CFR §1.97(b). No fee is required.

Respectfully submitted,

Virginia Dress  
Agent for Applicant(s)  
Registration No. 48,243

PIONEER HI-BRED INTERNATIONAL, INC.  
Corporate Intellectual Property  
7100 N.W. 62<sup>nd</sup> Avenue  
P.O. Box 1000  
Johnston, Iowa 50131-1000  
Phone: (515) 270-4192  
Facsimile: (515) 334-6883



Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 1 of 3

Complete if Known

Application Number	10/782,435
Filing Date	02/18/2004
First Named Inventor	Pramod B. Mahajan
Art Unit	
Examiner Name	
Attorney Docket Number	1121C

**U.S. PATENT DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
	A1	US-5,451,514	09/19/1995	Boudet et al.	
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			

**FOREIGN PATENT DOCUMENTS**

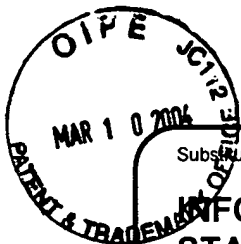
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)				
	A2	WO 99/00419	07/01/1999	Sumitomo Electric Industries, Ltd.		
	A3	EP 0 926 157 A1	06/30/1999	Sumitomo Electric Industries, Ltd.		
	A4	EP 1 033 405 A2	09/06/2000	Ceres Incorporated		

Examiner  
SignatureDate  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 2 of 3

**Complete if Known**

Application Number	10/782,435
Filing Date	02/18/2004
First Named Inventor	Pramod B. Mahajan
Art Unit	
Examiner Name	
Attorney Docket Number	1121C

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	A5	BLEWITT et al., Database EMBL Accession No. AI726943, BNLGHi6897 Six-day Cotton fiber Gossypium hirsutum cDNA 5' similar to (AB012122) TIP49 [Homo sapiens] gi/3243035, rRNA sequence (1999)	
	A6	BORK, Powers and Pitfalls in Sequence Analysis: The 70% Hurdle, Genome Research 10:398-400 (2000)	
	A7	CAMERINI-oTERO et al., Homologous Recombination Proteins in Prokaryotes and Eukaryotes, Annu. Rev. Genetics 29:509-552 (1995)	
	A8	KANEMAKI et al., Molecular Cloning of a Rat 49-kDa TBP-Interacting Protein (TIP49) That is Highly Homologous to the Bacterial RuvB, Biochem Biophys Res 235:64-68 (1997)	
	A9	KIKUCHI et al., GenBank Accession No. AB001581	
	A10	KOWALCZYKOWSKI et al., Biochemistry of Homologous Recombination in Escherichia coli, Microb. Rev. 58(3):401-465 (1994)	
	A11	LABRADOR, E., Database EMBL Accession No. AJ276264, Cicer arietinum mRNA for putative Ruv DNA-helicase (2000)	
	A12	MAKINO et al., TIP49, Homologous to the Bacterial DNA Helicase RuvB, Acts as an Autoantigen in Human, Biochem Biophys Res. 245:819-823 (1998)	
	A13	MAKINO et al., Database EMBL Accession No. AB012122, Homo sapiens mRNA for TIP49, complete cds (1998)	
	A14	NAKAMURA et al., Database EMBL Accession No. AB007651, Arabidopsis thaliana genomic DNA, chromosome 5, P1 clone:MWD9 (1997)	
	A15	NAKAMURA et al., Database EMBL Accession No. AB013390, Arabidopsis thaliana genomic DNA, chromosome 5, TAC clone:K919 (1998)	
	A16	QIU et al., An Eukaryotic RuvB-like Protein (RUVBL1) Essential for Growth, J. Biol. Chem. 273(43):27786-27793 (1998)	
	A17	WALBOT, V., GenBank Accession No. AI444686, Maize ESTs from various cDNA libraries sequenced at Stanford University (1999)	

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 3 of 3

**Complete if Known**

Application Number	10/782,435
Filing Date	02/18/2004
First Named Inventor	Pramod B. Mahajan
Art Unit	
Examiner Name	
Attorney Docket Number	1121C

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	A18	WALBOT, V., GenBank Accession No. AI467736, Maize ESTs from various cDNA libraries sequenced at Stanford University (1999)	
	A19	WALBOT, V., GenBank Accession No. AI629704, Maize ESTs from various cDNA libraries sequences at Stanford University (1999)	
	A20	WALBOT, V., Database EMBL Accession No. AI667714, Endosperm cDNA library from Schmidt lab Zea mays cDNA, mRNA sequence (1999)	
	A21	WALBOT, V., Database EMBL Accession No. AI444686, leaf primordia cDNA library from Hake lab Zea mays cDNA, mRNA sequence (1999)	
	A22	WALBOT, V., Database EMBL Accession No. AW927556, Mixed adult tissues from Walbot lab, same as 707 (SK) Zea mays cDNA, mRNA sequence (2000)	
	A23	WEST, S., Processing of Recombination Intermediates by the RuvABC Proteins, Annu. Rev. Genet. 31:213-244 (1997)	
	A24	ZERBIB et al., Coordinated Actions of RuvABC in Holliday Junction Processing, J. Mol. Biol. 281:621-630 (1998)	

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

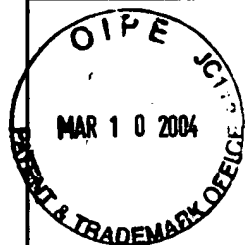
\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

**Certificate of Mailing under 37 CFR 1.8**

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

on March 8, 2004  
Date

Virginia Dress  
Signature

Virginia Dress  
Typed or printed name of person signing Certificate

Note: Each paper must have its own certificate of mailing, or this certificate must identify each submitted paper.

- 1) Transmittal Form / 1 Page (1 copy)
- 2) Filing of an IDS Under 37 CFR 1.97(b) / 1 Page (1 copy)
- 3) Information Disclosure Statement by Applicant / 3 Pages (1 copy)
- 4) IDS References - Numbered 1-24 (1 copy each)

This collection of information is required by 37 CFR 1.8. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.8 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.